

5 **Plant-derived peptides harboring water-cleaning and antimicrobial activities**

10 The present application claims a priority based on international patent application PCT/03/00568. The content of said priority application is hereby incorporated by reference.

Field of the invention

15 The present invention relates to a family of proteins which may be used for different purposes such as coagulation agents for water treatment or as antimicrobial agents.

State of the art

20 A protein corresponding to the above-cited definition, called FLO, is disclosed in PCT patent application WO 03/008441 A2 (OPTIMA ENVIRONNEMENT S.A.).

Summary of the invention

25 The present invention concerns derivatives of FLO which, surprisingly, show similar or higher coagulating or antimicrobial activities than FLO.
The inventors have also unexpectedly found that some of those derivatives may show either a coagulating or an antimicrobial activity.
Finally, it was found that other FLO derivatives had neither a coagulating nor an antimicrobial activity.

5 Detailed description of the invention

Table 1 summarizes the derivatives of FLO representing the object of the invention.

The following terms are used :

- +++ higher activity than FLO
- 10 ++ equivalent activity of FLO
- + lower activity than FLO
- no activity observed

- 15 More information regarding the detailed description of the invention (e.g. material & methods, experimental results) can be found in international patent application PCT/CH03/00568 which is incorporated by reference.

Table 1

		Coag.	antibt.
Flo			
QGPGRQPDFQRCGQQLRNISPPQRCPSLRQAVQLTHQQQGQVGPQQVRQMYRVASNIPST		++	++
predicted alpha helices			
XX			
Positive charge			
+ + + + (+) + +			
Glutamine (Gln)			
Q Q Q QQ Q Q Q QQ Q QQ Q			
Hydrophobic			
F C L I C L A V L V V M V A I			
Gln/Hydrophobic			
Q Q FQ C QQL I Q C L QAVQL QQQ QV QQV QM V A I			
P1			
QGPGRQPDFQRCGQQLRNISPP		-	+/-
P2	PQRCPSLRQAVQLTHQQQGQV	++	+
P3	GQVGPQQVRQMYRVASNIPST	-	-
P2.1	RCGQQLRNISPPQRCPSLRQAVQLTHQQQGQ	-	+++
P2a	PQRCPSLRQAV	-	-
P2b	SLRQAVQLTHQ	-	-
P2c	AVQLTHQQQGQV	-	-
P2ab	PQRCPSLRQAVQLTHQ	++	+/-
P2GR40	PQRCPSLRQAVQLTHQQQGQV	+++	++